

tribes of Borneo, and inhabited respectively districts on the Tutau and Tinjar rivers, tributaries of the Baram. They are practically extinct now.

The same curious custom occurs amongst the Alfours or Alfuros in the Molucca Islands, bowls or plates being slightly chipped in honour of the spirits of the departed ones, and also as their share of the property.*

C. D. ADAMS.

Measurements of some Dusuns.

On my expedition to Mt. Kinabalu, British North Borneo, I stayed several days in the Dusun village of Kiau, which is built on one of the spurs of the mountain, some 3000 ft. above sea-level. This village became my base, from which the ascent was made, as well as other excursions to different parts of the mountain. The natives of the village acted as carriers on these occasions, and I saw a good deal of them in one way and another; for instance, seeing that natural history specimens were the object of my visit, they used to swarm into my quarters at all hours of the day, to bring me plants, insects, and odds and ends, for which I doled out innumerable cents, wads of gambier, reels of cotton, needles, matches, &c.; then they used to take me to their houses to have a quiet talk sometimes, or perhaps to spend a cheery evening, enlivened with dances, beating of gongs, and a rather pleasant intoxicant made from fermented coconut water.

They were a friendly, hospitable lot, and I took the opportunity of measuring seventy-five of them, with the idea of comparing the measurements of their height with that of their span. I also got them to stretch their hands on a ruler and then noted in millimeters the measurement of their stretch from thumb to little finger. They made no objection to this performance, but treated the whole thing as a joke, the "patient" for the moment usually becoming the object of good-humoured gibes from his or her friends standing by.

The following three tables show the measurements of (1) forty-five adult men, (2) twenty boys, and (3) ten adult women.

* Vide *Java, Sumatra, and other islands of the Dutch East Indies*, by A. Cabaton.

TABLE I.

MEASUREMENTS OF ADULT DUSUN MEN OF KIAU.

Name.	Height in feet and inches.	Span in feet and inches.	Excess of span over height in inches.	Hand stretch in millimeters	Remarks.
1. Segugar ..	5·0 $\frac{1}{2}$	5·2 $\frac{1}{4}$	1 $\frac{3}{4}$	220	
2. Moian	5·3 $\frac{1}{4}$	5·5 $\frac{3}{4}$	2 $\frac{1}{4}$	205	
3. Ginulu....	4·9 $\frac{1}{2}$	4·11 $\frac{3}{4}$	2 $\frac{1}{4}$	192	
4. Kentuan ..	4·11	4·11 $\frac{3}{4}$	2 $\frac{3}{4}$	180	
5. Yali	4·11 $\frac{1}{2}$	5·3 $\frac{1}{2}$	4	200	
6. Gandilo ..	5·0 $\frac{1}{2}$	5·4 $\frac{3}{4}$	4 $\frac{1}{2}$	188	
7. Gandilo ..	5·2 $\frac{1}{2}$	5·5 $\frac{3}{4}$	3 $\frac{1}{4}$	198	
8. Baliong ..	4·11	5·1 $\frac{1}{2}$	2 $\frac{1}{2}$	189	
9. Gumpitan	4·11 $\frac{3}{4}$	5·1 $\frac{1}{2}$	1 $\frac{3}{4}$	191	
10. Sumpot ..	5·4 $\frac{1}{8}$	5·8 $\frac{1}{4}$	4 $\frac{1}{8}$	187	Chief of Kiau
11. Tembaging	5·1 $\frac{3}{4}$	5·5 $\frac{3}{8}$	3 $\frac{5}{8}$	195	
12. Dumalan ..	4·10 $\frac{1}{2}$	5·1 $\frac{1}{4}$	2 $\frac{3}{4}$	190	juv.
13. Rantian ..	5·2	5·3 $\frac{3}{4}$	1 $\frac{3}{4}$	190	
14. Segobun ..	5·3 $\frac{3}{4}$	5·7 $\frac{3}{8}$	3 $\frac{5}{8}$	213	
15. Berangit ..	4·11	5·1	2	195	
16. Yampungan	4·11 $\frac{1}{4}$	5·2	2 $\frac{3}{4}$	188	
17. Yobut	5·2 $\frac{1}{2}$	5·7 $\frac{1}{4}$	4 $\frac{3}{4}$	221	
18. Tingak....	5·2	5·4 $\frac{1}{2}$	2 $\frac{1}{2}$	191	
19. Segidun ..	5·3 $\frac{1}{2}$	5·5 $\frac{1}{4}$	1 $\frac{3}{4}$	194	
20. Damit	5·1	5·4 $\frac{3}{4}$	3 $\frac{3}{4}$	199	
21. Gaduan ..	5·1 $\frac{3}{4}$	5·2 $\frac{1}{4}$	1 $\frac{1}{2}$	195	
22. Gombat ..	5·0 $\frac{3}{4}$	5·3 $\frac{3}{4}$	3	200	
23. Tingaian ..	5·0 $\frac{1}{4}$	5·1 $\frac{1}{2}$	1 $\frac{1}{4}$	207	
24. Timbangan	5·0 $\frac{3}{4}$	5·4 $\frac{3}{4}$	4	185	
25. Lantou....	5·2 $\frac{3}{4}$	5·6 $\frac{1}{4}$	3 $\frac{1}{2}$	205	
26. Pendiling..	4·7	4·10 $\frac{1}{4}$	3 $\frac{1}{4}$	182	juv.
27. Mergis	4·9 $\frac{1}{4}$	5·0 $\frac{3}{4}$	3 $\frac{3}{4}$	180	juv.
28. Linkidun..	5·2 $\frac{1}{2}$	5·7 $\frac{3}{4}$	5 $\frac{1}{4}$	202	
29. Kelaman ..	4·11 $\frac{3}{4}$	5·4 $\frac{1}{4}$	4 $\frac{1}{2}$	178	
30. Gimundok	5·3 $\frac{3}{4}$	5·7	3 $\frac{1}{4}$	206	
31. Ambang ..	5—	5·4 $\frac{1}{8}$	4 $\frac{1}{8}$	191	
32. Lihoban ..	5·1 $\frac{1}{2}$	5·3 $\frac{1}{2}$	2	191	
33. Magaiou ..	4·10 $\frac{3}{4}$	5·1 $\frac{3}{4}$	3	187	
34. Koroh	5·1 $\frac{3}{4}$	5·4 $\frac{3}{4}$	3	204	
35. Sihoban ..	4·11 $\frac{1}{2}$	5·2 $\frac{1}{4}$	2 $\frac{3}{4}$	190	
36. Sindongat	5—	4·11 $\frac{1}{2}$ *	— $\frac{1}{2}$	189	* right arm stiff at elbow and slightly bent
37. Liman	5·0 $\frac{3}{4}$	5·5 $\frac{1}{2}$	4 $\frac{3}{4}$	208	
38. Timbangan	4·10	5·1 $\frac{1}{4}$	3 $\frac{1}{4}$	197	
39. Umpoh....	5·3	5·6 $\frac{3}{4}$	3 $\frac{3}{4}$	200	
40. Runggan ..	5·1	5·3	2	193	
41. Tembogok	5·0 $\frac{3}{4}$	5·4 $\frac{1}{4}$	3 $\frac{1}{2}$	205	
42. Ikatong ..	4·8 $\frac{1}{4}$	4·9 $\frac{3}{4}$	1 $\frac{1}{2}$	191	
43. Selagan ..	5·0 $\frac{1}{2}$	5·3 $\frac{1}{2}$	3	220	
44. Sudaran ..	4·11 $\frac{1}{4}$	5·2	2 $\frac{3}{4}$	187	
45. Sapoh	5—	5·2 $\frac{1}{2}$	2 $\frac{1}{2}$	198	
Average ...	5 ft. 0·533 n.	5 ft. 3·416 in.	2·883 in.	191·48 mm.	

TABLE II.
MEASUREMENTS OF DUSUN BOYS OF KIAU.

Name.	Height in feet and inches.	Span in feet and inches.	Difference in inches.	Hand stretch in millimeters	Remarks.
1. Poriak ..	3·7 $\frac{3}{4}$	3·8 $\frac{1}{2}$	$\frac{3}{4}$	156	"8 years"
2. Baioh ..	3·11 $\frac{1}{4}$	4·2	2 $\frac{3}{4}$	150	"10 years"
3. Kadok ..	4·6 $\frac{1}{4}$	4·6 $\frac{3}{4}$	$\frac{1}{2}$	185	? 14
4. Gunak ..	4·7	4·8 $\frac{1}{8}$	1 $\frac{1}{8}$	170	
5. Lompok	4·2 $\frac{3}{4}$	4·2 $\frac{3}{4}$	—	177	"9 years"
6. Bangku	4·8 $\frac{3}{4}$	4·11 $\frac{1}{2}$	2 $\frac{3}{4}$	175	? 14
7. Gitik ..	4·5 $\frac{1}{2}$	4·6 $\frac{1}{2}$	1	165	? 11
8. Gunting	4·2	4·2 $\frac{1}{4}$	$\frac{1}{4}$	159	? 9
9. Seribu ..	3·10	3·11 $\frac{3}{4}$	1 $\frac{3}{4}$	156	? 9
10. Temuk ..	4·0 $\frac{1}{2}$	4·0 $\frac{1}{4}$	— $\frac{1}{4}$	154	
11. Labi	4·4	4·5	1	155	
12. Gunak ..	4·0 $\frac{1}{4}$	4·2 $\frac{7}{8}$	2 $\frac{5}{8}$	154	
13. Ludin ..	3·11	4·0 $\frac{3}{4}$	1 $\frac{3}{4}$	152	
14. Gindat ..	4·9 $\frac{1}{4}$	5·0 $\frac{1}{2}$	3 $\frac{1}{4}$	197	? 15
15. Yapak ..	4·8 $\frac{1}{2}$	4·10 $\frac{1}{2}$	2	177	
16. Kiloh ..	4·5 $\frac{1}{2}$	4·8	2 $\frac{1}{2}$	175	
17. Duli	4·7 $\frac{1}{4}$	4·9 $\frac{3}{4}$	2 $\frac{1}{2}$	180	
18. Kandu ..	4·7 $\frac{1}{4}$	4·9 $\frac{1}{4}$	2	172	
19. Gadas ..	4·7 $\frac{1}{2}$	4·6 $\frac{5}{8}$	— $\frac{7}{8}$	174	
20. Kendapak	4·—	4·1 $\frac{1}{4}$	1 $\frac{1}{4}$	175	
Average ..	4 ft. 3·7125 in.	4ft. 5·14375 in.	1·43125 in.	167·9 mm.	

TABLE III.
MEASUREMENTS OF DUSUN WOMEN OF KIAU.

Name.	Height in feet and inches.	Span in feet and inches.	Difference in inches.	Hand stretch in millimeters.
1. Tokala	4·7 $\frac{3}{4}$	4·10 $\frac{3}{4}$	3	200
2. Rampaian	4·10 $\frac{1}{2}$	4·11 $\frac{1}{2}$	1	190
3. Kantihay	4·6	4·9 $\frac{1}{4}$	3 $\frac{1}{4}$	182
4. Sindahan	4·7	4·6 $\frac{1}{2}$	— $\frac{1}{2}$	175
5. Rinsayat	4·8 $\frac{1}{2}$	4·8 $\frac{3}{4}$	$\frac{1}{4}$	182
6. Kundisin	4·8 $\frac{3}{8}$	4·10 $\frac{1}{4}$	1 $\frac{7}{8}$	194
7. Surugou	4·6	4·6 $\frac{3}{4}$	$\frac{3}{4}$	177
8. Nigoh	4·8 $\frac{1}{2}$	4·9 $\frac{3}{4}$	1 $\frac{1}{4}$	195
9. Limpoka	4·9 $\frac{7}{8}$	4·9	— $\frac{7}{8}$	190
10. Siapah	4·4 $\frac{1}{2}$	4·5 $\frac{3}{4}$	1 $\frac{1}{4}$	180
Average	4ft. 7·7 in.	4ft. 8·825 in.	1·125 in.	186·5 mm.

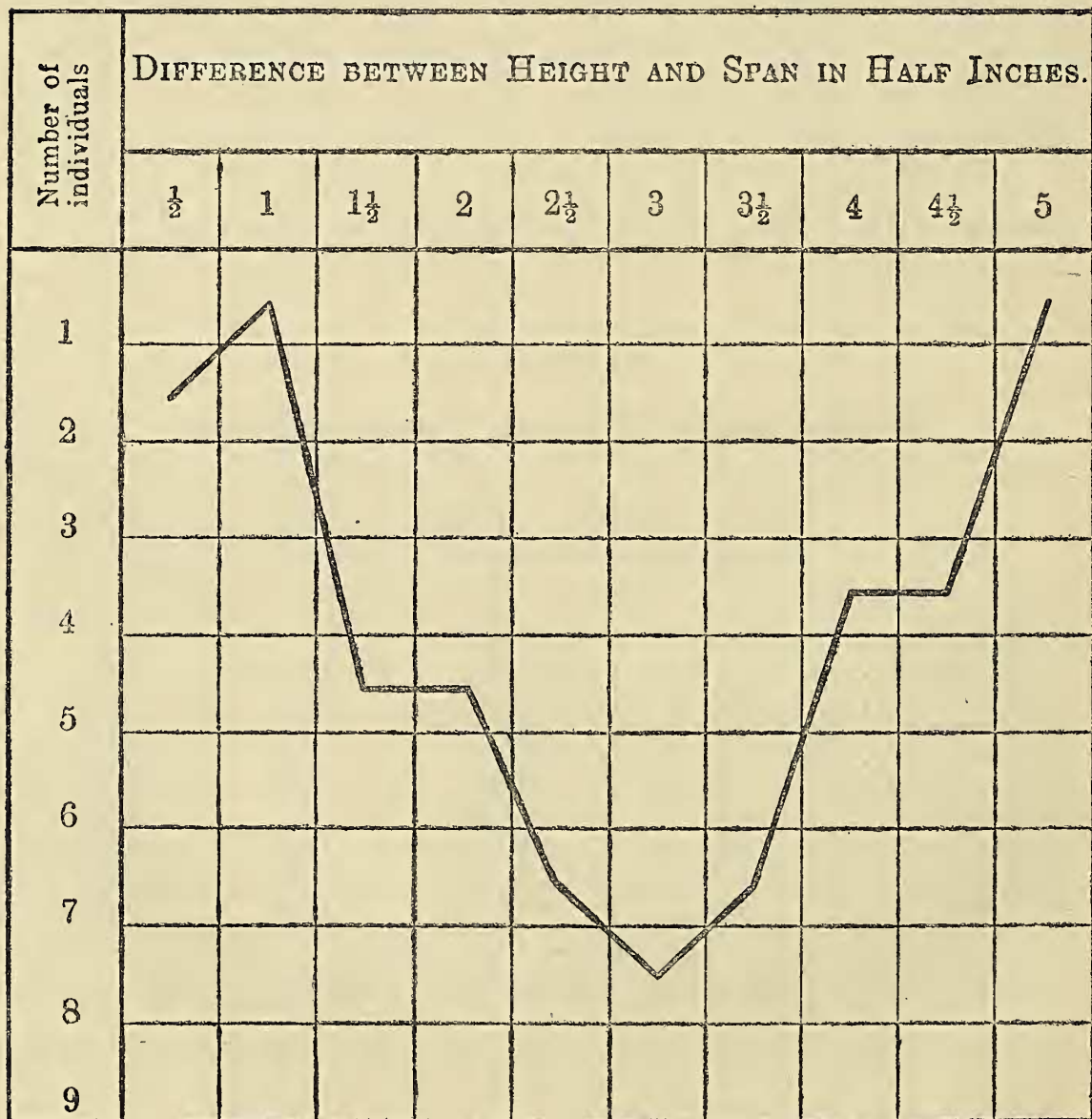
It is unsafe to generalize on such a small percentage of the Dusun tribe, but a few facts of interest emerge from these tables, which I think are not without value, at any rate as an indication of what we might expect from measuring a greater number of individuals.

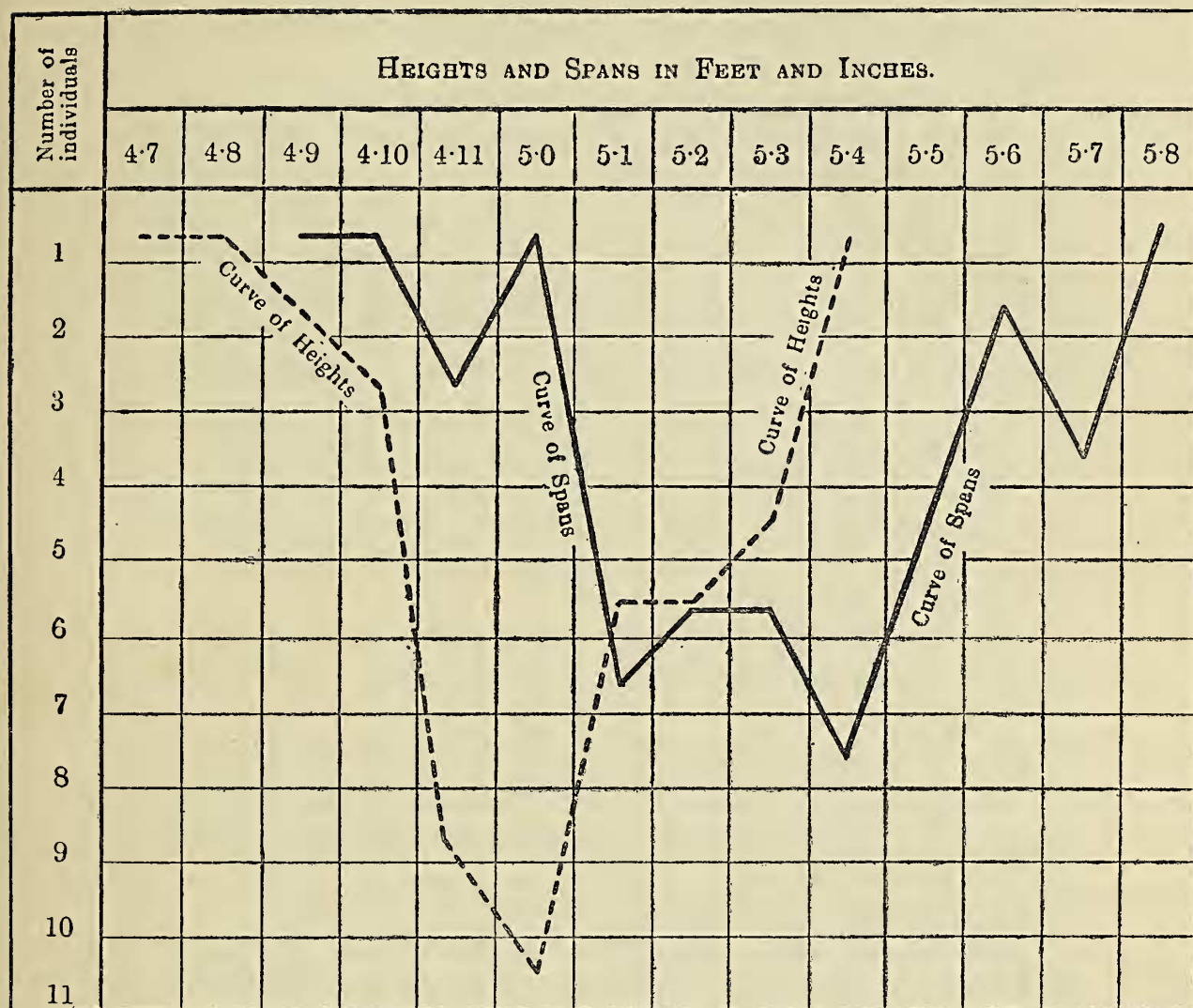
The average height of the men works out as 5 ft. 0½ in., with average span of nearly three inches more. In one case only was the span less than the height, *viz.* in one man whose right arm was stiff at the elbow and slightly bent. Two out of the remaining forty-four men spanned less than an inch over their height, six spanned less than 2 in. over their height. One man spanned 5½ in. more than his height.

Two of the shortest men measured 4 ft. 7 in. and 4 ft. 9¼ in., but I noted that they were probably not full grown. One of older years measured 4ft. 8¼ in.

The tallest man measured 5 ft. 4½ in. and spanned 5 ft. 8¼ in. This was Sumpot, the present Chief of Kiau.

The following curves illustrate the foregoing remarks:—





CURVES MADE FROM TABLE I.

The hand-stretches of the men ranged from 178 to 221 mm.; the average worked out as $191\frac{1}{2}$ mm.

In the second table we can see a less uniform difference between height and span. Out of the twenty boys measured, two spanned less than their height, one was "all square," three spanned less than an inch over their height, two spanned exactly an inch more, while one, who was older than most of the others, reached the maximum difference of $3\frac{1}{4}$ in.

Their heights ranged from 3 ft. $7\frac{3}{4}$ in. (for an eight-year old), with span of 3 ft. $8\frac{1}{2}$ in., to 4 ft. $9\frac{1}{4}$ in., with span of 5 ft. $0\frac{1}{2}$ in. for the above-mentioned older boy, whose age I put down as about fifteen. In three cases they told me what they thought was the age of the boys, and between us we guessed it for others. Of course, like other Bornean tribes, they have no system of counting the years, and one

can only get at any particular date by comparison with local events of some importance.

The interesting point about these two tables is that, in the adult the span invariably exceeds the height, and that the average difference is approximately *one-twentieth* of their average height, while in the boys the span does *not* always exceed the height, and in the twenty measured the average difference was only *one thirty-sixth* of their average height. Now there is no reason to suppose that the twenty boys I measured were below the average build of Dusun boys, so it looks as if the excess of span over height comes with increasing years, and as a factor in this development the life of the Kiau Dusuns strongly suggests use. The Dusun boy begins manual work at an early age, and for the last two or three years of his growing period probably does the full work of an adult.

One has often read that, as a proof (one of many) of man's simian ancestry, primitive races have a greater span in proportion to their height than more advanced races, but in that case should we not find it more marked in the young than in the adult? However, as stated above, it is unsafe to generalize from such meagre statistics as these; nevertheless, this little point is, I think, worth mentioning if only as one requiring more study.

Our third table contains measurements for only ten women, mostly adult but unmarried girls. They are not sufficient in number to need more than a very brief note.

Their heights range from 4 ft. 4½ in. to 4 ft. 10½ in., with an average of 4 ft. 7¾ in.; their span averages out as 1 in. more than their height. In two cases it is less than their height, in two more it is less than 1 in. over their height, while the maximum of 3 in. and 3¼ in. is reached by two other girls. Their average hand-stretch is 186.5 mm., or 5 mm. less than the average hand-stretch of the adult men.

J. C. MOULTON.